

APPENDIX A

Particle Size Conversion

Sieve Designation		Nominal Sieve Opening		
Standard	Mesh	inches	mm	Microns
25.4 mm	1 in.	1.00	25.4	25400
22.6 mm	7/8 in.	0.875	22.6	22600
19.0 mm	3/4 in.	0.750	19.0	19000
16.0 mm	5/8 in.	0.625	16.0	16000
13.5 mm	0.530 in.	0.530	13.5	13500
12.7 mm	1/2 in.	0.500	12.7	12700
11.2 mm	7/16 in.	0.438	11.2	11200
9.51 mm	3/8 in.	0.375	9.51	9510
8.00 mm	5/16 in.	0.312	8.00	8000
6.73 mm	0.265 in.	0.265	6.73	6730
6.35 mm	1/4 in.	0.250	6.35	6350
5.66 mm	No. 3 1/2	0.223	5.66	5660
4.76 mm	No. 4	0.187	4.76	4760
4.00 mm	No. 5	0.157	4.00	4000
3.36 mm	No. 6	0.132	3.36	3360
2.83 mm	No. 7	0.111	2.83	2830
2.38 mm	No. 8	0.0937	2.38	2380
2.00 mm	No. 10	0.0787	2.00	2000
1.68 mm	No. 12	0.0661	1.68	1680
1.41 mm	No. 14	0.0555	1.41	1410
1.19 mm	No. 16	0.0469	1.19	1190
1.00 mm	No. 18	0.0394	1.00	1000
841 μ m	No. 20	0.0331	0.841	841
707 μ m	No. 25	0.0278	0.707	707
595 μ m	No. 30	0.0234	0.595	595
500 μ m	No. 35	0.0197	0.500	500
420 μ m	No. 40	0.0165	0.420	420
354 μ m	No. 45	0.0139	0.354	354
297 μ m	No. 50	0.0117	0.297	297
250 μ m	No. 60	0.0098	0.250	250
210 μ m	No. 70	0.0083	0.210	210
177 μ m	No. 80	0.0070	0.177	177
149 μ m	No. 100	0.0059	0.149	149
125 μ m	No. 120	0.0049	0.125	125
105 μ m	No. 140	0.0041	0.105	105
88 μ m	No. 170	0.0035	0.088	88
74 μ m	No. 200	0.0029	0.074	74
63 μ m	No. 230	0.0025	0.063	63
53 μ m	No. 270	0.0021	0.053	53
44 μ m	No. 325	0.0017	0.044	44
37 μ m	No. 400	0.0015	0.037	37

Larger sieve openings (1 in. to 1/4 in.) have been designated by a sieve "mesh" size that corresponds to the size of the opening in inches. Smaller sieve "mesh" sizes of 3 1/2 to 400 are

designated by the number of openings per linear inch in the sieve.

The following convention is used to characterize particle size by mesh designation:

- a "+" before the sieve mesh indicates the particles are retained by the sieve;
- a "-" before the sieve mesh indicates the particles pass through the sieve;
- typically 90% or more of the particles will lie within the indicated range.

For example, if the particle size of a material is described as -4 +40 mesh, then 90% or more of the material will pass through a 4-mesh sieve (particles smaller than 4.76 mm) and be retained by a 40-mesh sieve (particles larger than 0.420 mm). If a material is described as -40 mesh, then 90% or more of the material will pass through a 40-mesh sieve (particles smaller than 0.420 mm).

This information is also provided on page T848 of the Aldrich 2003-2004 Catalog/Handbook of Fine Chemicals.

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